

## ALABAMA HIGHWAY'S IN THE MODERN ERA- THE INTERSTATE SYSTEM

The current Interstate Highway System was made possible by the Federal government becoming involved in highway finance through the 1916 legislation of Senator John Hollis Bankhead of Alabama. Subsequent legislation - in 1921, 1941, 1941, and 1954 - moved the United States towards a national highway system, but the basis for our Interstate system of the present was the Federal Highway Act of 1956.

Bankhead's Federal Aid Highway Act of 1916 provided for mutual cooperation between the states and Federal government. Construction work and labor were to be done in accordance with state laws and under the direct supervision of the state highway departments. Through indirect management, however, the Federal government would be able to prescribe certain standards of rural location and construction.

The National Highway Bill of 1920 was the First attempt to formulate a national highway system in the United States. The bill provided for the creation of a Federal Highway Commission to replace the existing Bureau of Public Roads. Its function would be to unify all of the highway authority of the government, and to construct and maintain at Federal government expense a national system of highways. This system would be composed of not more than 30,000 miles and would serve a dual purpose as defense highways. The bill was extremely important in that many of its suggestions were incorporated in highway acts to come much later. The bill was watered down, however, and almost completely altered in the final legislation - the Federal Highway Act of 1921. The Act did provide for some federal control of highway construction, though, and contributed to the development of the Federal government to a dominant role in highway finance.

Until the 1930's highway financing was done on a matching basis. When states had trouble matching funds, the federal government gave them grants which were to be repaid. As the Depression deepened, it became apparent that the states would never pay back the grants and the national government waived their repayment.

The present Interstate concept began with a 1939 Bureau of Public Works report outlining a 40,000 mile road system. An expressed need, by a parallel study, was for highways which would cut directly into the centers of large cities. Traffic maps indicated that 70 percent of all traffic on main highways was bound for cities. Such vehicles, the second study noted, would not use by-pass routes even if they existed. The Interstate idea was promoted through federal legislation in 1941, 1944, and 1954. The Defense Highway Act of 1941 gave the Federal government more power in determining location and use of highways built with federal funds. In the 1944 Federal Aid Highway Act Congress authorized a 40,000 mile system. The network would connect all cities of 100,000 population and most of those with 50,000 or more. Congress also approved the spending of \$500 million a year for three years on the Interstate system. Within the next three years the general routes making up the system were selected as a cooperative effort by the state highway departments and the United States Bureau of Public Roads (later renamed the Federal Highway Administration - FHWA). The general standards to which these highways were to be constructed were adopted by the American Association of State Highway Officials (AASHO), which represented the various state highway departments and the Bureau of Public Roads. The route selections and construction standards were subject to the approval of the Secretary of Commerce and Congress.

During the next few years very little was done by most of the states toward actually



constructing these new highways to the new and higher standards because of greatly increased costs per mile and material shortages at the end of World War II. In 1954, Congress provided road funds which could be used only on the new Interstate routes and which would be shared by the states on a 60 percent Federal and 40 percent State basis. While the standards previously adopted provided for controlled access, these additional funds were not conditioned on actual control of access. Thus Alabama, like most other states, began using the funds, but without the acquisition of access control, and without the building of highway grade separation structures, interchanges, and frontage roads that necessarily form a part of controlled access highways.

In the 1956 Federal Aid Highway Act, Congress, with but one dissenting vote, authorized funds for 90 percent of the estimated cost of completing the Interstate System over a period of thirteen years and apportioned the funds for the first three years. Alabama's share of these apportionments was \$20,314,823 in 1957, \$34,535,199 in 1958, and \$40,674,283 in 1959. Congress, in the 1956 Act, also authorized an increase in mileage from the original 40,000 miles to 41,000 miles.

The Highway Trust Fund was created in 1956 to hold the revenues generated from the new taxes on automobile products and their use. The law provided that these funds be matched on the basis of 90 percent Federal and 10 percent state funds. The government could not obligate more money to the states for any year than was already in the Trust Fund. Most of the revenue for the Trust Fund came from the four cents per gallon gasoline tax although there were also taxes on tires, inner tubes, retread rubber, tractor trailers and buses, and a ten percent tax on the manufacturers' sale price of new trucks, buses and trailers which supported the Trust Fund.

The Interstate program has been plagued from the beginning by cost overrun and

extensive modification. Without the Highway Trust Fund it is doubtful that the commitment to the Interstate would have been maintained. In 1955 federal planners calculated that they could build the Interstate for \$673 thousand a mile; later, as construction costs climbed, a widely quoted figure was one million dollars a mile. The Highway Trust Fund was scheduled to expire in 1974, but was extended as the completion date was again postponed.

In the 1958 Federal Aid Highway Act Congress increased the apportionment for the year 1959 and authorized the apportionment for the year 1960. Of these apportionments for the Interstate system, Alabama received \$4,087,867 as the increase for 1959, and \$49,053,500 as the apportionment for the year 1960. Alabama's Interstate system consisted of a total of 878.3 miles, which was essentially the same system of roads selected under provisions of the Federal Highway Act of 1944.

Nearly 32,000 miles or 79 percent of the main network was planned as four-lane highways, with traffic divided by a median. The remaining 21 percent was to be six or eight lanes. Although the system will comprise only a little more than one percent of the total road and street mileage in the U.S., it will carry at least 25 percent of the nation's traffic when completed.

The original 40,000 miles of Interstate highways in the nation was estimated to cost \$40 billion and was planned for completion in 1972. The estimate is now near \$100 billion total for the 42,500 miles with the last contracts to be let in 1979.

The first ten years of the Interstate Program progressed with a moderate annual increase in cost, due mainly to an improving economy and a gradually improved design based on experience. In 1965 the Highway Beautification Program was initiated which increased the cost per mile significantly, but it added much to the pleasure and ease of driving for the motorist. In 1967 the



emphasis was switched to safety and the yellow book, sometimes referred to as the "yellow menace," was published. The name "yellow menace" came about because many plans, almost ready for letting, had to be almost completely redrawn due to the new specifications in the yellow book. The design criteria were revolutionized, and bridge widths and clearances previously unheard of were introduced and required.

Alabama's system continued to expand and more and more miles were let to construction, and more and more miles were opened to traffic. The public was beginning to appreciate this vital link to all America. The system of Interstate and Defense Highways that was sweeping across the continental United States would tie every state into its web of inter-connecting highways. The Interstate system meant full freeways with no traffic lights and no grade intersections. With gentle grades and not stops, vehicles could maintain steady speeds (a factor important to all travelers and critical to the trucking industry) and the number of highway accidents and fatalities would be reduced.

Forty-nine states and the District of Columbia have Interstate mileage. Only Alaska is excepted. In the beginning the System was limited to the continental United States, but in August, 1960 three routes were approved for Oahu in the State of Hawaii to be added to the National System of Interstate and Defense Highways.

The first Interstate section to go under traffic in Alabama was 28 miles on I-65 from Kimberly to Cullman, opened in 1959. By 1968 more than fifty percent (56 percent, or 492 miles) of Alabama's Interstate system was under traffic. As 645 miles of the system were either completed or under construction, only 27 percent of the system remained to be placed under contract. In December of 1968 the 21.3 mile Huntsville spur was added to the State's system which increased

Alabama's total mileage to 899.9.

The most dramatic development in the Alabama Interstate system, however, was begun in 1969 with the contract letting of the Mobile Tunnel. This twin tube project was by far the largest undertaking of any project in the history of the State's system and the contract of \$47,494,000 was the largest single contract ever let in Alabama's Interstate program. This three thousand foot long structure constructed under the Mobile River took nearly three and a half years to build. This long awaited project was opened to traffic on February 10, 1973.

In 1970, fourteen years after the construction of the Interstate system began, Alabama had a total of 697.6 miles (77 percent of the total system) opened to traffic. The 1957-1970 mileage required 434 contracts totaling \$570,579,515. State and National construction progress, measured in miles opened to traffic, slowed considerably after 1970. The principal reasons for this were highway design changes to improve safety and increase traffic capacity (wider bridge widths and clearances, flatter slope sections, etc.), statutory, sociological and environmental requirements, rising costs without increased funding, and more complex projects and public opposition as the system moved into metropolitan areas.

Alabama continued to close the gaps on its system and in 1971 Interstate Route 85 was completed. Interstate Route 10 was completed except for the Mobile Bay crossing, which is scheduled to be completed in 1978. This seven mile dual bridge structure with an interchange at U.S. 90-98 replaced the Mobile Tunnel as the largest single contract (\$79,798,648) ever let in Alabama's Interstate system.

Although the system is not complete, the Interstate developments since 1956 have increased highway speeds, thus saving time and money; yet they have maintained high safety



standards resulting in the saving of an estimated 8,000 lives per year. Speed has increased from an average of 36 miles per hour in selected corridors in 1956 to 46 miles per hour in the same corridors (that include portions of completed Interstates) today. When the Interstate is fully completed within these corridors, the average speed, excluding any stops, will increase to between 50 and 60 miles per hour. As a result, the motorist who could travel 365 miles in ten hours in 1956 can not travel the 365 miles in eight hours or travel another 100 miles in the same ten hours. One Federal Highway Administration estimate of motorist monetary savings from this reduced travel -- for the 23 year period of 1956 to 1979 (with a completed Interstate) -- was \$377 billion (calculated at the rate of \$3 saved per hour of travel time eliminated).

The cumulative effect of increased average speed, reduced travel time, and money saved, is to "shrink" distances between cities and to influence Americans to take trips they would have never considered earlier. A 2,830 mile journey from New York to Los Angeles, which took 79 hours of travel in 1956 when Interstate mileage was negligible, can now be made in 62 hours by using Interstate routes in the same general corridor. The 17 hours a day to cross the country in two fewer days. Due to Interstates, trips too far and time-consuming to make in the 1950's can now be made in comfort and relative safety.

The target date for completion of the national system is dependent upon the impact of future inflation. A recent government report states that on completed Interstate as of January 1, 1974, the average cost per mile of rural Interstate was 1.0 million dollars and on urban, the average cost was 4.3 million dollars. The average cost per mile of the remaining Interstate is estimated at 3.2 million dollars for rural and 18.1 million dollars for urban. Construction costs for new segments. The remaining urban sections will cost about six times as

much per mile as the remaining rural sections. Even though the cost of Interstate will be very expensive, it is expected that the system will be completed in Alabama by 1985. The latest estimate indicates that when our system in Alabama is completed, it will have cost nearly two billion dollars.

The Interstate Highway system is the most massive construction project ever conceived by man. It is a program that is as yet unfinished and may never be completed, but the effort has been justified in terms of lives, money, and time saved. The highways are among the safest in the nation. They have paid for themselves many times over and reduced traveling time by hours in many states.